UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,924	12/16/2003	Takayuki Iida	Q78779	4245

23373   7590   06/18/2007

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER
ABDI, AMARA

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
06/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/735,924	IIDA, TAKAYUKI
	Examiner	**Art Unit**	
	Amara Abdi	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 December 2003</u>.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-15</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>12 December 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/16/2003</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

U.S. Patent and Trademark Office

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On page 23, line 18, **computer 44** was mentioned in the specification, but it is not include in the drawing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The specification is objected to because:

On page 15, line 9, " a fixed level or more" recite limitation. There is a leak of antecedent basis for the limitation in the specification.

Claim Objections

3.   Claims 1-7, and 9-13 are objected to because of the following informalities:

(1) Claim 1, line 21, "**an** image to be processed" should be changed to "**the** image to be processed",

(2) Claim 3, line 5, "**an** image" should be changed to "**the** image"; and the same informality was found in **claim 4**, line 3; **claim 5**, line 10, line 17 and line 19-20; **claim 9**, line 17; and **claim 14**, line 20;

(3) Claim 4, line4, "**a** human" should be changed to "**the** human";

(4) Claim 5, line 13, "**a** photographing" should be changed to "**the** photographing"; also on line 8, the examiner suggest deleting "which" between "information" and "indicates".

(5) Claim 8, line 11, "**a** fixed level" should be changed to "the fixed level";

(6) Claim 9, line 5, "**a** pupil" should be changed to "**the** pupil", and the same informality was found in **claim 14**, line 8

(7) Claim 10, line 10, "**a** correction' should be changed to "**the** correction";

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   Claims 14-15 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 14-15 define a "**computer data signal embodied in a carrier wave**" with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a "**computer data signal embodied in a carrier wave**" embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 112

6.   Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A "fixed level or more" was mentioned but not described in the specification, so the examiner interpreted "the fixed level or more" as the specified color of pupil (intensity). The rejection of claim 8 is based on that interpretation.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-3,5-6, and 8-12 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kito (US 6,628,899) in view of Enomoto (US-PGPUB 2003/0142285).

(1) Regarding claims 1 and 9:

Kito disclose an image processing system (column 1, line 14), and method

(column 6, line 42), comprising:

a storage component (20 in figure 1A) in which information indicating a rate of

occurrence of a pupil region having undesirable color tone (column 8, line 11-12), (the

pupil region having undesirable color tone is read as image data in association with the

information) which information is obtained by correcting the undesirable color tone of

the pupil region for an image in which the pupil region exists among a large number of

images (column 13, line 43-44) obtained by photographing the subject using a

photographing device (16 in figure 1A, column 8, line 5-6), is stored for each type of

photographing device (column 8, line 10-15), (the storage component is read as an

image memory); and

an image processor (26 in figure 2), wherein the image processor includes:

a detecting component (12 b in figure 8) which detects the type of the

photographing device of an image to be processed (column 14, line 15-17), which

image is obtained by photographing the subject using the photographing device (16 in

figure 1A, column 8, line 5-6), (the detecting component is read as the ID card) ;

an acquisition component (52 in figure 8) which acquires, from the storage

component (memory), information corresponding to the type of the photographing

device detected (ID information) by the detecting component (column 15, line 25-29),

(the acquisition component is read as the controller); and

a processing component (26 in figure 1B) which, when it is determined that the

probability that the pupil region having undesirable color tone exists in an image to be

processed is a predetermined value (column 13, line 32-35), (the probability is read on

the image processing condition) or more based on the information acquired by the

acquisition component (column 15, line 25-29), carries out searching for the pupil region

having undesirable color tone in the image to be processed (column 8, line 37-38), (the

searching for the pupil region is read on the processing of the image), and processing

for correcting undesirable color tone of the pupil region (column 13, line 43-53)

extracted by the searching (column 23, line 6-9).

Kito does not explicitly mention that the pupil region corresponding of an eye of a

human subject.

Enomoto, in analogous environment, teaches a method of detecting and

correcting the red eye, where the pupil region corresponds to an eye of human subject

(paragraph [007], line 3-9).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to use the method of Enomoto, where the pupil region

corresponding to the eyes of the human subject, in the method of Kito in order of correcting the red eye with enhanced efficiency by performing unified processing in red eye detection and correction irrespective of the difference in type of an input image, that is to say, whether an input image is from the digital camera of from a film such as negative or positive film (paragraph [0011], line 4-8).

(2) Regarding claim 2:

Kito further disclose the image processing system (figure 7, column 1, line 14), where:

the storage component further stores therein information (column 13, line 15-16) which indicates a correction parameter (column 12, line 18-24) determined so as to correct undesirable color tone of the pupil region for the image in which the pupil region having undesirable color tone exists (column 8, line 11-12), (the pupil region having undesirable color tone is read as image data in association with the information), for each type of photographic device (column 8, line 10-15), (the storage component is read as an image memory); and

the processing component (26 in figure 1B) determines, based on the information (column 13, line 15-16) which indicates the correction parameter (column 12, line 18-24) acquired by the acquisition component (52 in figure 8, column 15, line 25-29), (the acquisition component is read as the controller), a correction parameter (column 12, line 18-24) applied to correction of undesirable color tone in the pupil region (column 8, line 11-12) extracted from the image to be processed (column 23, line 6-9).

(3) Regarding claim 3:

Kito further disclose the image processing (figure 7, column 1, line 14), where the storage component is connected to a plurality of image processors via a communication line (column 12, 7-11), (the plurality of image processors is read on image processing subsections; and the communication line is read on network delivery section), and stores therein information obtained in such a manner (column 8, line 10-12) that correction of undesirable color tone in the pupil region for an image in which the pupil region having undesirable color tone exists is carried out by each of the plurality of image processors (column 13, line 45-53).

(4) Regarding claim 5:

Kito disclose the image processing apparatus (column 5, line 19) comprising:

a detecting component (12 b in figure 8) which detects the type of a photographing device in an image to be processed (column 14, line 15-17), which image is obtained by photographing a subject using the photographing device (16 in figure 1A, column 8, line 5-6), (the detecting component is read as the ID card);

an acquisition component (52 in figure 8) which acquires information corresponding to the type of the photographing device detected (ID information) by the detecting component (12 b in figure 8, column 15, line 25-29), (the acquisition component is read as the controller), from a storage component (20 in figure 1A) in which information indicates a rate of occurrence of a pupil region having undesirable color tone (column 8, line 11-12), (the pupil region having undesirable color tone is read as image data in association with the information), which information is obtained by

correcting undesirable color tone of the pupil region for an image in which undesirable color tone exists among a large number of images (column 13, line 43-44) obtained by photographing the subject using a photographing device (16 in figure 1A, column 8, line 5-6), is stored for each type of photographing device (column 8, line 10-15), (the storage component is read as an image memory); and

a processing component (26 in figure 1B) which, when it is determined that the probability that the pupil region having undesirable color tone exists in an image to be processed is a predetermined value (column 13, line 32-35), (the probability is read on the image processing condition) or more based on the information acquired by the acquisition component (column 15, line 25-29), carries out searching for the pupil region having undesirable color tone in an image to be processed (column 8, line 37-38), (the searching for the pupil region is read on the processing of the image), and processing for correcting undesirable color tone of the pupil region (column 13, line 43-53) extracted by the searching (column 23, line 6-9).

Kito does not explicitly mention that the pupil region corresponding of an eye of a human subject.

Enomoto, in analogous environment, teaches a method of detecting and correcting the red eye, where the pupil region corresponds to an eye of human subject (paragraph [007], line 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the method of Enomoto, where the pupil region corresponding to the eyes of the human subject, in the method of Kito in order of

correcting the red eye with enhanced efficiency by performing unified processing in red

eye detection and correction irrespective of the difference in type of an input image, that

is to say, whether an input image is from the digital camera of from a film such as

negative or positive film (paragraph [0011], line 4-8).

(5) Regarding claim 6:

Kito further disclose the image processing apparatus (column 5, line 19), where:

the storage component further stores therein information (column 13, line 15-16)

which indicates a correction parameter (column 12, line 18-24) determined so as to

correct undesirable color tone of the pupil region for the image in which the pupil region

having undesirable color tone exists (column 8, line 11-12), (the pupil region having

undesirable color tone is read as image data in association with the information), for

each type of photographic device (column 8, line 10-15), (the storage component is

read as an image memory); and

the processing component (26 in figure 1B) determines, based on the information

(column 13, line 15-16) which indicates the correction parameter (column 12, line 18-24)

acquired by the acquisition component (52 in figure 8, column 15, line 25-29), (the

acquisition component is read as the controller), a correction parameter (column 12, line

18-24) applied to correction of undesirable color tone in the pupil region (column 8, line

11-12) extracted from the image to be processed (column 23, line 6-9).

(6) Regarding claim 8:

Kito disclose all the subject matter as described in claim 1.

Kito does not explicitly mention that the processing is carried out by an operator, and making the determination of the red-eye correction whether the historical information is fixed level or more, and that the red eye region is a pupil region corresponding to the eyes of the human subject.

Enomoto, in analogous environment, teaches a method of detecting and correcting the red eye, where the processing is carried out by an operator (paragraph [0071], line 3-5), and the red eye correction is determined based on the specified color of pupil (paragraph [0012], line 4-12), where the red region is pupil region corresponding to the eyes of the human subject (paragraph [007], line 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the method of Enomoto, where the pupil region corresponding to the eyes of the human subject, in the method of Kito in order of correcting the red eye with enhanced efficiency by performing unified processing in red eye detection and correction irrespective of the difference in type of an input image, that is to say, whether an input image is from the digital camera of from a film such as negative or positive film (paragraph [0011], line 4-8).

(7) Regarding claim 10:

Kito further discloses the image processing method (column 6, line 42), further comprising the steps of:

determining a correction parameter for the image (column 12, line 18-24) in which the pupil region having undesirable color tone exists (column 8, line 11-12), (the pupil region having undesirable color tone is read as image data in association with the

information) among a large number of images (column 6, line 47), (the large number of images is read as plurality of images), and correcting undesirable color tone of the pupil region using the determined correction parameter (column 8, line 11-12), and further storing information (column 13, line 15-16) indicating the determined correction parameter in the storage component for each type of photographing device (column 8, line 10-15), (the storage component is read as an image memory); and

based on the information (column 13, line 15-16) indicating the correction parameter (column 12, line 18-24) and acquired from the storage component (column 8, line 10-15), determining a correction parameter (column 12, line 18-24) applied to correction of undesirable color tone in the pupil region (column 8, line 11-12) extracted from the image to be processed (column 23, line 6-9).

(7) Regarding claim 11:

Kito disclose all the subject matter as described in claim 9 above.

Kito does not explicitly mention the determination as to whether at least one of the pupil regions having undesirable color tone exist or not, and that the correction is carried out by an operator.

Enomoto, in analogous environment, teaches a method of detecting and correcting the red eye, where determining as to whether at least one of the pupil regions having undesirable color tone exist or not (paragraph [0077], line 2-6), (the existing or not of the undesirable color tone is read as the evaluation of the degree of roundness), and the correction is carried out by an operator (paragraph [0071], line 3-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the correcting method of the red eye of Enomoto in the system of Kito in order to provide a method of detecting and correcting the red eye with enhanced efficiency by performing unified processing in red eye detection and correction irrespective of the difference in type of an input image (input type), that is to say, whether an input image is from a digital camera or from a film such as negative or positive film (paragraph [0011], line 4-8).

(8) Regarding claim 12:

Kito further discloses the image processing method (column 6, line 42), where the storage component (20 in figure 1A) is connected to a plurality of image processors (column 13, line 4) via a communication line (column 13, line 11-20), and stores therein information (column 13, line 15-16) obtained in such a manner that correction of undesirable color tone in the pupil region for an image in which the pupil region having undesirable color tone exists (column 8, line 11-12) is carried out by each of the plurality of image processors (column 12, line 18-24).

9.   Claims 4,7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kito and Enomoto, as applies to claims 1,5, and 9, and further in view of Sannoh et al. (US PG-PUB 2003/0071908)

(1) Regarding claims 4,7 and 13:

Kito and Enomoto disclose the entire subject as described in claims 1,5, and 9 above.

Kito and Enomoto do not explicitly mention that a human subject is photographed in a full-faces manner using an electronic flash, where the flash light is reflected by the eye portions of the human subject.

Sannoh et al., in an electronic flash control method and computer program, teaches the photographing of human subject in a full-face manner (paragraph [0071], line 3-8) using an electronic flash (paragraph [0185], line 5-6), where the photographing intention can be reflected (paragraph [0190], line 12-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the electronic flash control method of Sannoh et al. in the system of Kito in order to be able to automatically judge whether a human object is to be photographed, without troubling the user, and be able to automatically emit light suitable for the human object photographing, and program for a computer to execute the method (paragraph [0016], line 3-7).

10.   Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kito in view of Marni (US 6,285,410).

(1) Regarding claim 14:

Kito discloses all the subject matter as described in claims 1 and 9 above.

Kito does not explicitly mention the computer data signal embodied in a carrier wave, where the data signal representing a control program that is readable by a controller of an image processing apparatus.

Marni, in analogous environment, teaches a method and system for removal of flash artifacts from digital images, where a communication device may be used to generate or receive a carrier wave modulated with a data signal, or function-extending program code that can be executed by the processing unit (column 10, line 25-31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the carrier wave modulated with the signal data of Marni system in the system of Kito in order for the operating system to be loaded from non-volatile storage into system memory by the processing unit, such as direct memory access controller. Sequences of instructions comprised by the operating system are then executed by the processing unit (column 10, line 41-50).

(2) Regarding claim 15:

Kito disclose all the subject matter as described in claim 14 above.

Kito does not explicitly mention the data signal, where the carrier wave is stored in a recording medium.

Marni, in analogous environment, teaches a method and system for removal of flash artifacts from digital images, where the carrier wave is modulated with the signal data (column 10, line 25-26), and the memory may include non-volatile storage such as computer readable medium (column 10, line 32-36), where the carrier wave is stored in the memory (column 10, line 36-37 and line 52-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the carrier wave modulated with the signal data of Marni system in the system of Kito in order for the operating system to be loaded from non-

volatile storage into system memory by the processing unit, such as direct memory access controller. Sequences of instructions comprised by the operating system are then executed by the processing unit (column 10, line 41-50).

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu Jingge can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amara Abdi
06/04/2007

JINGGE WU
SUPERVISORY PATENT EXAMINER